Claim 1 *(Twice Amended)* An aiming device for visually indicating a reading zone, comprising at least one illuminating assembly active on the reading zone portion along an optical emission path, said at least one illuminating assembly comprises:

a light source;

a diaphragm having a preset shape for selecting a portion of the light generated by said source; and

a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting said collimated shaped light onto the reading zone portion.

Claim 23. *(Twice Amended)* An optical apparatus for reading information, including an aiming device for visually indicating along a Z axis a reading zone, comprising at least one illuminating assembly active on a reading zone portion along an optical emission path, said at least one illuminating assembly comprises:

a light source;

a diaphragm having a preset shape for selecting a portion of the light generated by said source; and

a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting it onto the reading zone portion.

Claim 24 *(Twice Amended)* A method for aiming and visually indicating a reading zone, characterized in that the method comprises the steps of:

generating, by means of a light source, at least one light beam for illuminating a portion of the reading zone along an emission path;

selecting, by means of a shaped diaphragm, a portion of the light beam generated by the light source;

collimating, by means of a converging lens, the portion of the shaped light beam coming from the diaphragm; and

projecting, onto the reading zone portion, the light beam picked up on the converging lens.

-- 31. An aiming device for visually indicating a reading zone, the device comprising at least two first illuminating assemblies disposed on opposite sides with respect to an aiming axis Z and active on respective portions of the reading zone along an optical emission path in order to identify on the reading zone respective patterns, wherein each of said at least two first illuminating assemblies comprises:

- a light source;
- a diaphragm having a preset shape for selecting a portion of the light generated by said source;
- a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting the collimated light onto the reading zone portion.

32. A device according to Claim 31, wherein the converging lens is positioned at a suitable distance away from the diaphragm such that the shaped light coming from the diaphragm is focused onto the reading zone portion.

33. A device according to Claim 31, wherein said at least two first illuminating assemblies are disposed symmetrically relative to the aiming axis Z such that their respective optical emission paths identify a linear portion on the reading zone.

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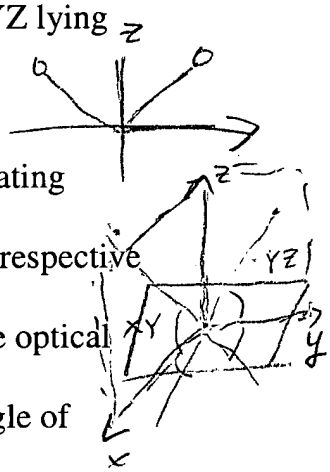
34. A device according to Claim 31, comprising at least two second illuminating assemblies disposed symmetrically relative to the aiming axis Z and active on respective portions of the reading zone along respective optical emission paths such that these optical emission paths identify, jointly with the optical paths of the first illuminating assemblies, a quadrangular portion on the reading zone.

35. A device according to Claim 31, wherein each light source generates an inclined optical beam with respect to a first and a second reference plane XZ, YZ lying perpendicular to and intersecting each other along the aiming axis Z.



36. A device according to claim 35, comprising at least two first illuminating assemblies disposed symmetrically relative to the aiming axis Z such that their respective optical emission paths identify a linear portion on the reading zone, wherein the optical paths of the first illuminating assemblies are set, relative to the axis Z, at an angle of $+\phi_V/2$ and $-\phi_V/2$, respectively, on the first reference plane XZ, and at an angle of $+\phi_H/2$ and $-\phi_H/2$, respectively, on the second reference plane YZ.

37. A device according to claim 35, comprising at least two second illuminating assemblies disposed symmetrically relative to the aiming axis Z and active on respective

portions of the reading zone portion along respective optical emission paths such that these optical emission paths identify, jointly with the optical paths of the first illuminating assemblies, a quadrangular portion of the reading zone, wherein the optical paths of the second illuminating assemblies are set, relative to the axis Z, at an angle of $+\phi_V/2$ and $-\phi_V/2$, respectively, on the first reference plane XZ, and at an angle of $+\phi_H/2$ and $-\phi_H/2$, respectively, on the second reference plane YZ.

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38. A device according to claim 37, comprising at least two substantially tubular elements, each having an inclined upper surface for accommodating the light source of one of said at least two illuminating assemblies such that the optical path of the illuminating assembly is inclined at angles of $\pm\phi_V/2$ and $\pm\phi_H/2$ relative to the axis Z.

39. A device according to Claim 31, further comprising at least one optical deflection prism disposed on each optical emission path.

40. A device according to claim 37, wherein each optical emission path of the first and second illuminating assemblies comprises a first path length set, relative to the axis Z, at an angle of $+\phi_V/2$ and $-\phi_V/2$ and $+\phi_H/2$ and $-\phi_H/2$, respectively, on the first and second reference planes XZ and YZ, and a second path length set, relative to the axis Z, at an angle of $+\phi_V/2$ and $-\phi_V/2$ and $+\phi_H/2$ and $-\phi_H/2$, respectively, on the first and second reference planes XZ and YZ, and at an angle of $+\phi_H/2$ and $-\phi_H/2$ and $+\phi_V/2$ and $-\phi_V/2$, respectively, on the second and first reference planes YZ and XZ.

41. A device according to claim 40, further comprising at least one optical deflection prism disposed on each optical emission path, wherein the optical deflection prism is effective to deflect the second path lengths through angles of $\pm\phi_H/2$ and $\pm\phi_v/2$.

42. A device according to claim 37, wherein each optical emission path of the first and second illuminating assemblies comprises a first path length substantially parallel to the aiming axis Z, and a second path length set, relative to the axis Z, at an angle of $+\phi_v/2$ and $-\phi_v/2$, respectively, on the first reference plane XZ, and at an angle of $+\phi_H/2$ and $-\phi_H/2$, respectively, on the second reference plane YZ.

43. A device according to Claim 42, comprising a pair of optical deflection prisms arranged on each optical emission path and effective to deflect the second path lengths through angles of $\pm\phi_H/2$ and $\pm\phi_v/2$.

44. A device according to Claim 42, comprising a single optical deflection prism arranged on each optical emission path downstream of the converging lens and effective to deflect the second path lengths through angles of $\pm\phi_H/2$ and $\pm\phi_v/2$.

45. A device according to Claim 43, wherein the optical prisms of each pair of optical prisms are of a integral construction and are placed downstream of the converging lens on the optical emission path.

46. A device according to claim 43, wherein the optical prism of each pair of optical prisms is formed integrally with the optical prism of the pair of prisms situated on the same side with respect to the second reference plane YZ.

47. A device according to claim 46, wherein the optical prisms of each pair of optical prisms are of integral construction and are placed downstream of the converging lens on the optical emission path, wherein the pairs of optical prisms situated on the opposite side with respect to the second reference plane YZ are mutually associated by a mounting plate.

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48. A device according to Claim 31, further comprising at least two tubular elements associated with a holding/supplying plate for the light sources, each tubular element being adapted to isolate the light emitted by the source and hold the diaphragm and converging lens.

49. A device according to Claim 31, wherein each illuminating assembly comprises a V-like light guide disposed, on the emission path, between the light source and the converging lens and effective to generate a pair of optical paths respectively set, relative to the axis Z, at an angle of $\pm\phi_H/2$ on a second reference plane YZ.

50. A device according to Claim 31, further comprising a means for determining a distance of the reading zone from the device.

51. A device according to Claim 31, further comprising a means for determining an orientation of the reading zone with respect to the device.

52. A device according to Claim 51, further comprising a means for determining a distance of the reading zone from the device, wherein the means for determining said distance and orientation of the reading zone comprises:

- a lens for picking up the light diffused from the illuminated portion of the reading zone;

- means for sensing an image of the light diffused from the reading zone and picked up on the lens;

- means for processing the image acquired by the sensing means for calculating the distance and orientation of the reading zone according to the size of the diaphragm, a distance between the sensing means and the diaphragm, a distance between the lens and the converging lens, and a size of the image acquired by the sensing means.

53. An optical apparatus for reading information, comprising an aiming device for visually indicating a reading zone, the device comprising at least two first illuminating assemblies disposed on opposed sides with respect to an aiming axis Z and active on respective portions of the reading zone along respective optical emission paths in order to identify on the reading zone respective patterns, wherein each of said at least two first illuminating assemblies comprises:

- a light source;

- a diaphragm having a preset shape for selecting a portion of the light generated by said source;

- a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting the collimated light onto the reading zone portion.

54. A method for aiming and visually indicating a reading zone, characterized in that the method comprises the steps of:

- generating, by means of at least two light sources, at least two light beams for illuminating respective portions of the reading zone along respective emission paths;

- selecting, by means of shaped diaphragms having a predetermined size, a portion of each of the light beams generated by the light sources;

- collimating, by means of converging lenses, the portions of the shaped light beams coming from the diaphragms;

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- projecting, onto the reading zone portion, the light beams picked up on the converging lenses in order to identify on the respective portions of the reading zone respective patterns.

55. A method according to Claim 54, comprising the step of determining a distance of the reading zone.

56. A method according to Claim 54, comprising the step of determining an orientation of the reading zone.

57. A method according to Claim 55, further comprising the step of determining a distance of the reading zone, wherein the steps of determining the reading zone distance and orientation comprise the following steps:

- picking up, on a receiving lens, the light beam diffused from the illuminated portion of the reading zone;

- acquiring, on a sensing means, an image of the light diffused from the reading zone and picked up on the receiving lens;

- processing the acquired image to calculate the distance and orientation of the reading zone according to the size of the diaphragm, a distance between the sensing means and the diaphragm, a distance between the lens and the converging lens, and a size of the image picked up on the sensing means.

58. A device according to claim 44, wherein the optical prism of each pair of optical prisms is formed integrally with the optical prism of the pair of prisms situated on the same side with respect to the second reference plane YZ.

59. An aiming device for visually indicating a reading zone, the device comprising at least two first illuminating assemblies disposed opposed sides with respect to an aiming axis Z and active on opposed portions of the reading zone along respective optical emission paths in order to identify on the reading zone at least two discrete patterns, wherein each of said at least two first illuminating assemblies comprises:

- a light source;
- a diaphragm having a preset shape for selecting a portion of the light generated by said source;
- a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting the collimated light onto the reading zone portion.

60. An optical apparatus for reading information, comprising an aiming device for visually indicating a reading zone, the device comprising at least two first illuminating assemblies disposed on opposed sides with respect to an aiming axis Z and active on opposed portions of the reading zone along respective optical emission paths in order to identify on the reading zone at least two discrete patterns, wherein each of said at least two first illuminating assemblies comprises:

- a light source;
- a diaphragm having a preset shape for selecting a portion of the light generated by

said source;

- a converging lens placed downstream of the diaphragm for collimating the shaped light coming from the diaphragm and projecting the collimated light onto the reading zone portion.

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61. A method for aiming and visually indicating a reading zone, characterized in that the method comprises the steps of:

- generating, by means of at least two light sources, at least two light beams for illuminating opposed portions of the reading zone along at least two emission paths;

- selecting, by means of shaped diaphragms having a predetermined size, a portion of each of the light beams generated by the light sources;

- collimating, by means of converging lenses, the portions of the shaped light beams coming from the diaphragms;

- projecting, onto the reading zone portion, the light beams picked up on the converging lenses in order to identify at the opposed portions of the reading zone at least two discrete patterns.

62. An aiming device for visually indicating a reading zone, the device comprising at least one illuminating assembly active on a reading zone portion along an optical emission path, said at least one illuminating assembly comprises:

- a light source;

- a diaphragm having a preset shape for selecting a portion of the light generated by said source;

- a converging lens placed downstream of the diaphragm for collimating the shaped

light coming from the diaphragm and projecting the collimated light onto the reading zone portion, wherein the converging lens is positioned at a suitable distance away from the diaphragm such that the image of the shaped light coming from the diaphragm is focused onto the reading zone portion. --